



## SPIDER ON THE GO

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It used to be that travel left the Spider discontent, cut off from his familiar web. But now, in the age of batteries and low-power chips, inexpensive gadgets access information everywhere.

### HITTING THE ROAD

Wanting to know more about computing on the go, the Spider gathered up his silk and set out to learn about mobile computing.

**mobilis** • [www.volksware.com/mobilis/](http://www.volksware.com/mobilis/)

*mobilis* is "the mobile computing and lifestyle magazine." We found it an entertaining compendium of mobile computing product trends. For *mobilis*, mobile computing is defined primarily as handheld computing devices, but also includes devices like innovative laptops and smart cell phones. The best articles in this issue discuss the ubiquity of Kaa-Nabi, "CAr NAVigation" computers in Japan, and outline Microsoft's new ventures into mobile computing.

In "Kaa-Nabi, Another Phase of Mobile Computing," Matsushita Shuji relates that a Kaa-Nabi can not only tell you where you are (based on global positioning satellite information), but also plan your trip relative to traffic jams and parking availability. Add-on units perform voice recognition (for hands-free operation), inter-Kaa-Nabi communication (to keep cars traveling together together), Web browsing and

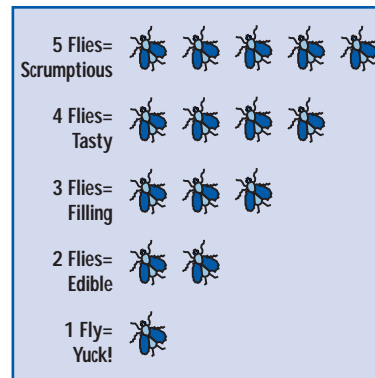
karaoke (for when you really can't avoid the Tokyo traffic jams), and route recording (to ease Big Brother's surveillance problems). Shuji parodies a friend who won't drive down the block without her Kaa-Nabi, much as an American driver won't drive a vehicle without a beverage holder. He suggests that Kaa-Nabis are becoming so indispensable that soon cars without them will be banned from public highways. This will be a problem for the Spider, who prefers not to leave a trail of evidence.

In "First Looks at the Microsoft Palm PC," John Jerney relates the product launches of the Palm PC and Auto PC. These machines run version 2 of Windows CE, and feature ease of synchronization with other Microsoft products like Windows and Internet Explorer. (Oops, make that just one product.) They also promise radio-wave communication that will synchronize machines based on mere proximity (leading, we're sure, to the first proximity-based computer virus transmission). The AutoPC will integrate standard auto sound systems with navigation and computing. That sounded really nifty until we remembered that all the Japanese are driving around with karaoke computers.



### VIRTUAL OFFICES FOR MOBILE PROFESSIONALS

Real white-collar work happens in real offices. Where does the virtual white-



collar worker work? In a virtual office. A new set of businesses has been sprouting on the Net to provide virtual offices—sort of like those Potemkin offices one can rent for a day when meeting with an important client. The Spider took a look at three of these.

**Netopia** • [www.netopia.com/software/nvo/](http://www.netopia.com/software/nvo/)

Creating a Netopia office requires both setting up a GeoCities homestead and getting a Netopia account. That worked well until it came time to download the Netopia software. It took several trials and many errors before the Spider managed to get the software to work.

Netopia's office is simple yet functional. The office door lists information about the occupant. There are in and out baskets, allowing visitors to deposit and retrieve files. There is space for your favorite links and pictures. And, of course, a place for the ubiquitous business card. The most obvious deficiency is the lack of a video connection. The interesting part of Netopia is in the conference operation, where a visitor can knock to find out if anyone is home. Finally, visitors can also look at the occupant's screen and control the occupant's computer. These last two features enable an interesting variety of resource sharing.



*Netopia's office is simple but adequate.*

**Virtual Offices** • [www.VirtualOffices.com/](http://www.VirtualOffices.com/)

The first page of this site raised expectations of a sophisticated, Web-wise virtual office. Then came the nightmare.

First, the Spider needed to register by filling out three Web pages of questions. After the questionnaire and a software download, the Spider anticipated entering a nice-looking office. The Spider was wrong. The Virtual Office was an America Online look-alike circa 1995—virtually prehistoric. There was no Web browser. Instead, we got a slow connection and were told to download a series of upgrades. (Remember that the Spider just downloaded the system!)

We also faced fees for using the videoconferencing facilities (\$89.95) and Web phone (\$49.95). The Spider did not try them, being determined to eschew software that is simultaneously expensive and inept. The moral of this tale is to not be fooled by fancy advertising. The promised “private virtual office center” for creating your own meeting place on the information highway turned out to be an old shack on a dirt toll road.

*The Spider left hungry.*

**Instant!Teamroom US West ·**  
**teamroom.interact.net/**

Web rumors suggest that Instant!Teamroom, an instantiation of Lotus Notes and Domino, should prove to be a good virtual office. This site makes it espe-

cially easy to sign up (at \$15/month per team member) but especially difficult to try the system without signing up.

*The Spider wants to kick the tires before buying, but will give some credit for our prior good experience with the Lotus products.*

The Spider believes there's a pony in virtual offices, but just not yet. The Spider suspects that riding that pony won't be nearly as expensive as some of these sites.

### WHERE TO FIND MORE

As with all things Internet, there is a wealth of online documentation on mobile computing. But how to weed through the piles of virtual paper? The Spider found a couple of useful sites.

**Aline Baggio's Bibliography on Mobile Computing ·**  
**www.sor.inria.fr/~aline/mobile/biblio.html**

What enables mobile computing? Lots of things, according to Aline Baggio. Baggio has assembled a bibliographic listing of over 500 papers, covering topics such as network control, mobile integration with the Internet, mobile databases, mobile applications (such

as shopping), user interfaces, mobile cooperative work, and mobile security. Many of the references have hypertext links to the papers.

A valiant effort, though including something reviewing the content of the papers would have made it outstanding.

**Global Mobile Information Systems Defense Advanced Research Projects Agency ·**  
**www.ito.darpa.mil/research/glomo/**

“To satisfy defense requirements for rapidly deployable and robust information systems,” the US Department of Defense is funding the GloMo research project. Topics of interest include robust networking, distributed computing techniques, and “untethered” devices. (Isn't that quaint. Somehow, we don't think these guys are working on untethered devices for shopping.) The principal value of the site is a listing of the project contracts with summaries of results and pointers to the research sites. We particularly liked the University of Kansas work on rapidly deployable radio networks (<http://www.ittc.ukans.edu/RDRN/>). If El Niño keeps raining like this, we may need their help.

## IEEE INTERNET COMPUTING

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